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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/646,139	09/13/2000	Tatsuaki Ishida	10873.384USW	2382

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EXAMINER
RICKMAN, HOLLY C

ART UNIT	PAPER NUMBER
1773	17

DATE MAILED: 08/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/646,139	ISHIDA ET AL.	
	Examiner	Art Unit	
	Holly Rickman	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 May 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *4-7,10-12 and 15-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *4,6,7,10-12,15-18,20 and 21* is/are rejecte

7)☒ Claim(s) *5 and 19* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *16*.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 10-11 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Bar-Gadda (US 5468075).

Bar-Gadda discloses a disk medium comprising an embossed substrate having patterned magnetic portions therein. The substrate material may be glass Si or C and the magnetic portions are formed from Fe or Co for example (col. 5, lines 16-29; Fig. 2b).

Furthermore, the reference teaches that a protective film formed from C is formed over the patterned/embossed composite (col. 5, lines 64-67).

It is noted that the limitation "master information carrier" is an intended use limitation and does not appear to be further limiting in so far as the structure of the product is concerned. "[I]n apparatus, article, and composition claims, intended use must result in a structural different between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art." In re Casey, 370 F.2d 576, 152 USPQ 235 (CCPA 1967); In re Otto, 312 F.2d 937, 938 136 USPQ 458, 459 (CCPA 1963). See MPEP 2111.02.

3. The rejection of claims 10, 16, 20, and 22 under 35 U.S.C. 102(e) as being anticipated by Ishida et al. (US 6347016) is withdrawn in view of Applicant's amendments to the claims.

Claim Rejections - 35 USC § 102/103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 12 is rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bar-Gadda (US 5468075).

Bar-Gadda discloses a disk medium comprising an embossed substrate having patterned magnetic portions therein. The substrate material may be glass Si or C and the magnetic portions are formed from Fe or Co for example (col. 5, lines 16-29; Fig. 2b).

Furthermore, the reference teaches that a protective film formed from C is formed over the patterned/embossed composite (col. 5, lines 64-67). The reference does not teach how the C layer is deposited on the disk medium. However, this is a process limitation in an article claim and does not patentably distinguish the present claims over the invention taught by Bar-Gadda since the two appear to be substantially the same.

Even though product-by-process claims are limited and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

When there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show the same process of making. *In re Brown*, 173 USPQ 685 and *In re Fessmann*, 180 USPQ 324.

Claim Rejections - 35 USC § 103

6. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bar-Gadda (US 5468075).

Bar-Gadda teaches all of the limitations of the claims as set forth above except for the claimed thickness of the protective overcoat.

It would have been obvious to one of ordinary skill in the art at the time of invention to optimize the thickness of the protective layer taught by Bar-Gadda since the thickness of the layer clearly affects its ability to protect the surface of the underlying structure from damage. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

7. Claims 6-7, 15, 17, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xuan et al. (US 6214434) in view of Yamamoto et al. (IEEE Trans. Magn., Vol. 33, No. 5, Sept. 1997, pp 3016-3018).

Xuan et al. disclose a magnetic recording medium having a substrate and a non-magnetic layer disposed thereon having magnetic portions formed in a pattern in the track length direction of the medium (see Fig. 4B). Xuan et al. teach that the magnetic portions are formed from Ni, Co, or alloys thereof. The reference also teaches that a C protective layer is deposited on top of the patterned layer (col. 4, lines 49-59). The reference states that a variety of materials can be used for the non-magnetic layer including Cr, Si, other metals and non-metals. However, the claimed non-magnetic materials are not specifically disclosed.

Yamamoto et al. disclose a magnetic recording medium formed from patterned columns of Ni embedded in SiO_2 or PMMA (p. 3016, second column).

It would have been obvious to one of ordinary skill in the art to use either of the non-metal materials disclosed by Yamamoto et al. in combination with the patterned Ni material

taught by Xuan et al. In view of Xuan's broad teaching of "non-metals", one of ordinary skill in the art would have expected the non-metals disclosed by Yamamoto et al. to be functionally equivalent to the specific non-magnetic carrier materials named by Xuan et al.

With respect to claim 17, Xuan et al. teach all of the limitations of the claims as set forth above except for the claimed thickness of the protective overcoat.

It would have been obvious to one of ordinary skill in the art at the time of invention to optimize the thickness of the protective layer taught by Xuan et al. since the thickness of the layer clearly affects its ability to protect the surface of the underlying structure from damage. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

8. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable Xuan et al. (US 6214434) in view of Yamamoto et al. (IEEE Trans. Magn., Vol. 33, No. 5, Sept. 1997, pp 3016-3018) as applied to claims over 6-7, 15, 17, and 22, above, and further in view of Aine (Re. 32,464).

The combination of Xuan et al. in view of Yamamoto et al. fails to teach the use of an electrically conductive protective layer.

Aine teaches that it is know in the art to use an electrically conductive protective layer on magnetic recording media in order to prevent the build up of static electricity (col. 2, lines 2-4).

It would have been obvious to one of ordinary skill in the art at the time of invention to use an electrically conductive protective layer on the magnetic recording medium taught by Xuan et al. in order prevent the build up of static electricity as suggested by Aine.

Allowable Subject Matter

9. Claims 5 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claims 5 and 19 are allowable over the closest prior art to Xuan et al. (US 6214434). Xuan et al. fails to teach or suggest a motivation to substitute polyimide for the non-magnetic carrier materials disclosed therein. With respect to claim 19, Xuan et al. is directed to a magnetic recording medium having the claimed structure but fails to disclose a method of making the medium using a master information carrier having the claimed structure.

Response to Arguments

11. Applicant's arguments filed 5/19/03 have been fully considered but they are not persuasive. Applicant argues that Bar-Gadda and Xuan in view of Yamamoto hava an embossed ***uniform*** pattern that does not correspond to information signals as does the claimed pattern which is nonuniform. Applicant's argument is not persuasive because there is nothing in the claims requiring that the pattern be non-uniform.

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12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Rickman whose telephone number is (703) 305-2642. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on (703) 308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Holly Rickman
Primary Examiner
Art Unit 1773

hcr
August 25, 2003